



Illinois Department of Natural Resources

One Natural Resources Way Springfield, Illinois 62702-1271
www.dnr.illinois.gov

Bruce Rauner, Governor
Wayne A. Rosenthal, Director

The Illinois Department of Natural Resources Office of Resource Conservation and the Illinois Department of Natural Resources Office of Water Resources hereby agree to extend the Incidental Take Authorization executed on June 27, 2014, for the take of bluebreast darter (*Etheostoma camurum*), eastern sand darter (*Ammocrypta pellucidum*), bigeye chub (*Hybopsis amblops*), river redhorse (*Moxostoma carinatum*), wavy-rayed lampmussel (*Lampsilis fasciola*), and black sandshell (*Ligumia recta*) at the Ellsworth Dam Removal Project pursuant to Condition 2 of the agreement authorized under the Illinois Endangered Species Protection Act (520 ILCS 10/5.5). The deadline shall be extended to December 31, 2021, and all survey and reporting requirement deadlines shall hereby be extended accordingly. All other terms of the Incidental Take Authorization remain in effect and unaltered. It has been determined that (1) the circumstances said to necessitate the change were not reasonably foreseeable at the time the agreement was signed, or (2) the change is germane to the original agreement as signed, or (3) the change is in the best interest of State government and authorized by law.

*For the Illinois Department of Natural Resources
Office of Resource Conservation*

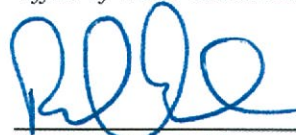


Mr. Christopher L. Young, Director

Date

11/7/16

*For the Illinois Department of Natural Resources
Office of Water Resources*



Mr. Rick Gosch, Manager
Division of Capital Planning

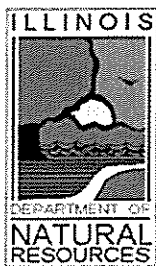
Date

10/31/16

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Illinois Department of Natural Resources

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Pat Quinn, Governor
Marc Miller, Director

Authorization for Incidental Take and Implementing Agreement

Pursuant to the Illinois Endangered Species Protection Act (Act)(520 ILCS 10/5.5) and the regulations adopted to implement the Act (17 Ill. Adm. Code 1080), authorization is hereby granted to the Illinois Department of Natural Resources, Office of Water Resources (hereinafter referred to as OWR) for the incidental take of the bluebreast darter (*Etheostoma camurum*), eastern sand darter (*Ammocrypta pellucidum*), bigeye chub (*Hybopsis amblops*), river redhorse (*Moxostoma carinatum*), wavy-rayed lampmussel (*Lampsilis fasciola*), and black sandshell (*Ligumia recta*). The Illinois Department of Natural Resources (hereinafter referred to as the Department) has determined that the taking is incidental to activities associated with the removal of the Ellsworth Park Dam from the North Fork of the Vermilion River at Danville, Vermilion County, Illinois. The dam is located approximately 0.53 miles upstream of the confluence of the North Fork of the Vermilion River with the Vermilion River.

Note: There are two Vermilion Rivers in Illinois. One is part of the Illinois River drainage; the other is in the Wabash River drainage. All references to the Vermilion River in this document are to the Wabash River tributary.

Procedural History

On January 29, 2014, OWR submitted a conservation plan to the Department as their application for authorization of incidental take of the species listed above. After initial review, the Department requested minor modifications to the conservation plan. A revised conservation plan was received by the Department on February 4, 2014, including the proposed public notice. The public notice period will be detailed under #6 of the Compliance section below.

Compliance with the Illinois Endangered Species Protection Act

The Act includes six criteria that must be satisfied for the authorization of incidental take of an endangered or threatened species. These criteria and the Department's determination for each are listed below.

1. The taking will not be the purpose of, but will only be incidental to, the carrying out of an otherwise lawful activity:

The stated and apparent purpose of this proposed action is the complete removal of the Ellsworth Park Dam on the North Fork of the Vermilion River at Danville, Illinois. Dam removal is proposed as a means to improve public safety by eliminating the hydraulic roller at the dam, improve the ecological integrity of the dam site, enhance river system connectivity, and increase recreational opportunity on the river. Take of the bluebreast darter, eastern sand darter, bigeye chub, river

redhorse, wavy-rayed lampmussel, and/or black sandshell may result from the immediate demolition and removal of the dam or from siltation downstream if a heavy precipitation event occurs soon after dam removal. The taking that could occur is not the purpose of OWR's activities, but is incidental to the carrying out of an otherwise lawful activity.

2. The parties to the conservation plan will, to the maximum extent practicable, minimize and mitigate the impact caused by the taking:

The conservation plan prepared by OWR describes measures that will be implemented to minimize the potential taking of the bluebreast darter, eastern sand darter, bigeye chub, river redhorse, wavy-rayed lampmussel, and black sandshell.

Project plans specify that the channel of the North Fork of the Vermilion River will be disturbed only at the dam and a distance of 50 feet upstream of the dam. Sediment surveys and modeling have been conducted to predict the possible effects of sediment movement after dam removal is complete. Surveys show that the substrate upstream of the dam is nearly all cobble and gravel. Deposition of this material downstream, if it should occur, is not expected to degrade habitat conditions for the endangered and threatened species that may be present in the area. Downstream movement of this material will likely be gradual, with movement expected to occur during 2-year or larger precipitation events. If a 100-year precipitation event occurs as a first event after dam removal, as much as 1.2 feet of material could be deposited downstream.

During dam removal, construction equipment and rock placement will be limited to dry ground as much as possible. Those portions of the channel that will be directly affected by dam removal will be inspected by mussel and fisheries biologists prior to any placement of material or equipment in the channel.

Before dam removal work begins, biologists from the Illinois Natural History Survey will relocate all mussels from the project area to suitable habitat beyond the project area. As dam removal proceeds, portions of the pool upstream of the dam will be dewatered. As water levels recede in the upstream pool, the contractor or biologists will inspect the dewatered area and relocate any mussels or fishes that have been stranded to downstream areas with at least 12 inches of water. A final search for stranded mussels and fishes will be conducted when dewatering of the upstream pool is complete.

To document the effects of dam removal on the fish and mussel communities in the North Fork of the Vermilion River, Eastern Illinois University and the Illinois Natural History Survey have conducted fish and mussel surveys upstream and downstream of the dam in 2012 and 2013. Annual surveys will continue through 2016 to detect any changes in the diversity and abundance of fishes and mussels.

Throughout the dam removal process, OWR will advise DNR's local fisheries biologist of the status of the project and allow the biologist to be present for evaluation of methods, searches for stranded fishes and mussels and other aspects of the project.

It is the opinion of the Department that these measures, along with any additional terms and conditions listed in the Authorization section of this document will, to the maximum extent practicable, minimize and mitigate the impact caused by the potential taking.

3. The parties to the conservation plan will ensure that adequate funding for the conservation plan will be provided:

Funding for OWR projects is provided by appropriation by the Illinois General Assembly. Policy requires that those funds must be released for construction before a contract is awarded for a given project. Sufficient funds for this project have been identified in the OWR budget. Funding for fish sampling by Eastern Illinois University will come from an approved State Wildlife Grant from the U.S. Fish and Wildlife Service. OWR estimates that that cost of mitigation measures for this project will be \$34,020.

Based on the existing OWR budget and the previous approval of the State Wildlife Grant, it is the Department's conclusion that adequate funding for the conservation plan will be available as needed.

4. Based on the best available scientific data, the Department has determined that the taking will not reduce the likelihood of survival or recovery of the endangered species or threatened species in the wild within the State of Illinois, the biotic community of which the species is a part, or the habitat essential to the species' existence in Illinois:

The bluebreast darter is listed as an endangered species in Illinois. The species has no formal federal conservation status. Bluebreast darters are small fish, seldom exceeding three inches in length. In Illinois, they are known only from the Vermilion River system. The Vermilion River population of bluebreast darters represents the western limit of the species distribution in the U.S. Maintenance of water quality is the most important factor in protection of the species. OWR has estimated the potential take of this species at one to three individuals.

The Illinois Natural Heritage Database includes 14 element occurrence records for the bluebreast darter that are classified as extant. All of these occurrences are in east-central Illinois within the Vermilion River system. The Department has issued one previous incidental take authorization for the bluebreast darter. That authorization was for take related to the replacement of the Anderson Hill bridge in Vermilion County. For that project, the Vermilion County Highway

Department agreed to minimize the footprint of their work and limit the number of days on which instream work would occur.

The eastern sand darter is listed as a threatened species in Illinois. The species has no formal federal conservation status. Siltation, impoundments and declining water quality are the major factors in the decline of the species throughout its range. Eastern sand darters are small fish, usually 2-3 inches in length. They are most often found in medium to large streams with sand or sand-gravel bed material. In Illinois, eastern sand darters are found in the Vermilion, Embarras, and Little Wabash River drainages. OWR has estimated the potential take of this species at one to three individuals.

The Illinois Natural Heritage Database includes 27 element occurrence records for the eastern sand darter that are classified as extant. Twenty-one of these records are from the Embarras River system and the other six are from the Vermilion River system. The Department has issued no previous incidental take authorizations for the eastern sand darter.

The bigeye chub is listed as an endangered species in Illinois. The species has no formal federal conservation status. Bigeye chubs are small fish, usually 2.5 to 3.5 inches in length. They are most commonly found in small to medium streams with sandy, rocky or gravely bed material. They make use of pools with little current but near riffles. Their name reflects their dependence on sight to locate food and they are very intolerant of turbid water. In Illinois, they are known only from the Vermilion, Wabash and Iroquois River systems. OWR has estimated the potential take of this species at one to seven individuals.

The Illinois Natural Heritage Database includes 21 element occurrence records for the bigeye chub that are classified as extant. The Department has issued one previous authorization for incidental take of bigeye chubs. That authorization was for take related to the replacement of the Anderson Hill bridge in Vermilion County (the same project as the sole authorization for take of the bluebreast darter).

The river redhorse is listed as a threatened species in Illinois because of its limited range and threats to its habitat such as siltation and pollution. The species has no formal federal conservation status. Historically, it was found in the Wabash, Rock and Illinois River drainages. OWR has estimated the potential take of this species at one to four individuals.

The Illinois Natural Heritage Database includes 27 occurrences of the river redhorse that are classified as extant. The species is most often found in deep, gravely riffles of small and medium-sized rivers. The Department has issued

four previous authorizations for incidental take of the river redhorse. These were for bridge replacement projects in Kane and Vermilion counties, installation of hydropower facilities in an existing Illinois River dam in LaSalle County, and a cooling water discharge in Will County. A fifth authorization for incidental take of river redhorse has been requested for installation of hydropower in an existing dam in Grundy County.

The wavy-rayed lampmussel is classified as an endangered species in Illinois. The species has no formal federal conservation status. In the early 20th century, this species was reported from the eastern part of Illinois from Cook County to the Ohio River. By the 1960s, it was known only from the Vermilion River system. Pollution and siltation are believed to be the principle causes of this marked decline. Wavy-rayed lampmussels are most often found in clear, small to medium-sized streams with sand or gravel substrates. OWR has estimated the potential take of this species at one to two individuals.

The Illinois Natural Heritage Database includes 20 element occurrence records for the wavy-rayed lampmussel that are classified as extant. All of those occurrences are in the Vermilion River or its tributaries. The Department has issued four previous authorizations for incidental take of wavy-rayed lampmussels. All of those authorizations were for projects in Vermilion County; three for bridge replacement/repair work and one for the installation of shoreline erosion control.

The black sandshell is listed as a threatened species in Illinois. It has no formal federal conservation status. Black sandshells were once known from nearly all river systems in Illinois. In more recent years, it has been found in only about one-fourth as many drainages as in the past. Favored habitat is riffles and raceways with sand or gravel substrate. The decline of this species is believed to be related to siltation and pollution as well as the mining of sand and gravel from rivers. OWR has estimated the potential take of this species at one to three individuals.

The Illinois Natural Heritage Database includes 98 element occurrence records for the black sandshell that are classified as extant. Many of the occurrences are in the Mississippi River, with additional records from the Vermilion, Rock, Kishwaukee, Kankakee and other rivers. The Department has issued 13 previous authorizations for incidental take of black sandshells. Seven of those were for bridge repair/replacement projects. Other project types included dredging of boat/barge channels, pipeline installation or removal, and placement of rock and/or rip rap for navigation improvements. Project locations were in Calhoun (1 project), Lee (1), McHenry (1), Mercer (1), Rock Island (2), Whiteside (2), Will (2), and Winnebago (3) Counties. The project in Calhoun County was cancelled after the authorization for incidental take was issued.

Removal of the Ellsworth Park Dam, grading of the channel upstream of the dam, and placement of stone for bank protection between the US Highway 150 bridge and the dam site will directly affect approximately 0.9 acres of riverine habitat. Removal of the dam will make approximately 14 acres of riverine habitats available to the species discussed in this document and any other species that are present in this reach of the North Fork of the Vermilion River. This upstream area is currently unavailable to most species because the Ellsworth Park Dam acts as a barrier to upstream movement.

The Department has concluded that the taking proposed herein will not reduce the likelihood of survival or recovery of the bluebreast darter, eastern sand darter, bigeye chub, river redhorse, wavy-rayed lampmussel or black sandshell in the wild within the State of Illinois, the biotic community of which these species are a part, or the habitat essential to the species' existence in Illinois. This conclusion is based on the following considerations:

For each of these species, the area that will be affected by dam removal represents only a very small portion of the available habitat. The bluebreast darter has the most restricted distribution of the species of concern for this project, but is found at numerous locations within the Vermilion River system. All other species occur at scattered locations in the Vermilion River system as well as in other river drainages in Illinois. The temporary disturbance of 0.9 acres of what is presently sub-optimal habitat with a resulting increase of 14 acres in potential habitat is likely to have a positive long-term effect on these species. Post-project surveys at other dam removal sites in Illinois have shown an increase in the abundance and diversity of fishes and mussels. Surveys following this project will determine if this project has paid benefits to the listed species. The increase in available aquatic habitat that will result from dam removal is seen by the Department as adequate compensation for the small area of habitat that will be disturbed by this project.

Based on the results of fish and mussel surveys on the North Fork of the Vermilion River in recent years, the take estimated by OWR (no more than seven individuals of any species) appears to be adequate, if not generous. Small numbers of most species have been found in this stream, but no concentrations of any of the subject species have been recorded. Considering the apparently small number of individuals present and the measures to be taken by OWR to minimize adverse effects, e.g., pre-project relocation of mussels and "rescue" of stranded fish and mussels during dam removal, it is anticipated that the actual take, if any, will be in the lower range of OWR's estimates. Any take that may occur is not likely to be significant to the population of these species in the North Fork of the Vermilion River or in the State of Illinois.

5. Any measures required under Section 5.5(b)(6) of the Act will be performed:

These measures are listed below under "Authorization." This authorization is, by definition, subject to those terms and conditions and an official OWR signature on this authorization indicates OWR's commitment to performing those measures.

6. The public has received notice of the application and has had the opportunity to comment before the Department made any decision regarding the application:

Public notice of the availability of OWR's conservation plan for review and comment was published in the (Taylorville) Breeze-Courier on February 13, February 20, and February 27, 2014, and in the (Danville) Commercial-News on February 13, February 20, and February 27, 2014. The conservation plan was posted on OWR's website and a copy of the conservation plan was deposited at the Danville Public Library where it was available for public review. The deadline for public comment was March 30, 2014. No comments were received from the public.

Authorization

It is the determination of the Department that the measures to be implemented by the Office of Water Resources will adequately minimize and mitigate the anticipated taking of bluebreast darter, eastern sand darter, bigeye chub, river redhorse, wavy-rayed lampmussel and/or black sandshell incidental to the removal of the Ellsworth Park Dam on the North Fork of the Vermilion River in Vermilion County, Illinois. Further, the Department has concluded that the take authorized herein will not reduce the likelihood of survival or recovery of the bluebreast darter, eastern sand darter, bigeye chub, river redhorse, wavy-rayed lampmussel or black sandshell in the wild within the State of Illinois, the biotic community of which these species are a part, or the habitat essential to the species' existence in Illinois.

All terms and conditions included in the aforementioned conservation plan submitted by OWR to the Department are incorporated into this agreement by reference and are made a part thereof.

Pursuant to Section 5.5 of the Illinois Endangered Species Protection Act [520 ILCS 10/5.5] and the Administrative Rules for the Incidental Taking of Endangered and Threatened Species [Ill. Adm. Code 1080.40(b)], this authorization is issued subject to the following terms and conditions, which may include additions or modifications to the minimization and mitigation measures proposed by the applicant in #2 above:

1. This authorization is effective upon the signature of the Department and shall remain in effect through December 31, 2016, unless terminated by written agreement by both parties.

This authorization may be revoked pursuant to the Act and Ill. Adm. Code 1080.80(b) if the Department finds that OWR has failed to comply with any of these terms and conditions or has been responsible for the taking of bluebreast darters, eastern sand darters, bigeye chubs, river redhorse, wavy-rayed lampmussels, or black sandshells

beyond that which is incidental to removal of the Ellsworth Park Dam on the North Fork of the Vermilion River in Vermilion County, Illinois.

2. The effective period of this authorization may be altered by mutual written agreement between OWR and the Department. In this event, the Department shall notify the Illinois Endangered Species Protection Board of any such alteration.

Any substantive changes, including but not limited to a change in the project footprint or a change in the Illinois endangered or threatened species which could potentially be affected, will require that a new conservation plan be submitted to the Department to initiate the review and public notice process as required by the Act.

3. Incidental Take Authorizations are non-transferrable.
4. OWR will ensure that the channel of the North Fork of the Vermilion River will be disturbed only at the dam and a distance of 50 feet upstream and downstream of the dam.
5. During dam removal, OWR will ensure that construction equipment and rock placement will be limited to dry ground as much as possible. Those portions of the channel that will be directly affected by dam removal will be inspected by mussel and fisheries biologists prior to any placement of material or equipment in the channel. In the event that any State-listed fish or mussel species is found, the Department shall be notified within 48 hours of any relocation.

Supporting documentation, including maps, shall be submitted to:

Jenny Skufca, Endangered Species Project Manager
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702
(217)557-8243
jenny.skufca@illinois.gov

The Department's Endangered Species Program shall provide all reports required under this agreement to the Illinois Endangered Species Protection Board and to the Illinois Natural Heritage Database.

6. OWR estimates a temporary disturbance of 0.9 acres of sub-optimal habitat with a resulting increase of 14 acres of newly available potential habitat upstream after dam removal. The Department's mitigation ratio of 5.5:1 for creation, restoration, or acquisition of State-listed species habitat is exceeded [$0.9 \text{ acres} \times 5.5 = 4.95 \text{ acres}$]. Therefore, no further mitigation is requested. The dam removal project is likely to provide conservation benefit to all six State-listed species.
7. Before dam removal work begins, OWR will ensure that biologists from the Illinois Natural History Survey will relocate all mussels from the project area to suitable habitat

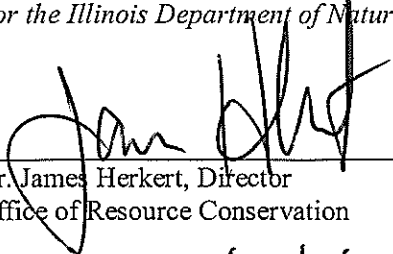
beyond the project area. As dam removal proceeds, portions of the pool upstream of the dam will be dewatered. As water levels recede in the upstream pool, the contractor or biologists will inspect the dewatered area and relocate any mussels or fishes that have been stranded to downstream areas with suitable habitat and at least 12 inches of water. A final search for stranded mussels and fishes will be conducted when dewatering of the upstream pool is complete. A report describing the species and numbers of fishes and mussels relocated, including a map of the relocation area for all State-listed species, shall be provided to the Department within 60 days of the completion of each survey/relocation.

8. To document the effects of dam removal on the fish and mussel communities in the North Fork of the Vermilion River, OWR will ensure that staff of Eastern Illinois University and the Illinois Natural History Survey or other qualified contractors approved by the Department conduct a survey in 2016 to detect any changes in the diversity and abundance of fishes and mussels.

Following the completion of the final survey in 2016, a report shall be prepared to summarize and compare the results of all pre-project and post-project surveys. That report shall be provided to the Department within 120 days of the final survey in 2016.

9. Throughout the dam removal process, from project commencement to completion, OWR will advise DNR's District Fisheries or Streams biologist of the status of the project and allow the biologist to be present for evaluation of methods, searches for stranded fishes and mussels and other aspects of the project.
10. The OWR official identified below is authorized to execute this agreement. Execution by OWR indicates acceptance of all terms and conditions described in this authorization.
11. The execution of this agreement does not waive or excuse the responsibilities of OWR to comply with other Federal, State or local regulations, including but not limited to obtaining any required permits for the execution of this project.

For the Illinois Department of Natural Resources

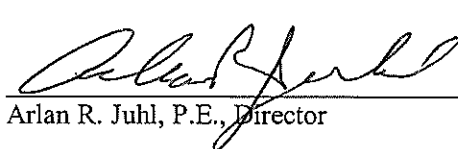


Dr. James Herkert, Director
Office of Resource Conservation

Date

6/27/14

For the Office of Water Resources, Department of Natural Resources



Arlan R. Juhl, P.E., Director

Date

6-10-14

